

DOCUMENT RESUME

ED 170 796

CS 502 444

AUTHOR Poulger, Davis
TITLE Refusal to Counterattitudinally Encode: A Study.
PUB DATE Nov 78
NOTE 9p.; Paper presented at the Annual Meeting of the
Speech Communication Association (64th, Minneapolis,
Minnesota, November 2-5, 1978)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attrition (Research Studies); *Changing Attitudes;
*Communication (Thought Transfer); Dropouts;
*Experimental Groups; Higher Education; *Research
Methodology; *Research Problems; Statistical Bias
IDENTIFIERS *Communication Research

ABSTRACT

A study was conducted of experimental mortality (subjects' drop-out) in counter-attitudinal advocacy research, a line of research that explores the extent to which people can be induced to persuade themselves to a new attitude. Subjects were 54 volunteers from undergraduate speech classes. The study involved three stages: a pretest for attitude, instructions to the subjects that experimenters were preparing for a different experiment in which there would be an attempt to persuade subjects to a different point of view and that participants in the current experiment were being asked to encode a short persuasive message, and a posttest consisting of four questionnaires, one of which was the Burgoon Unwillingness to Communicate Scale. In stage two, subjects were told that they were not required to encode the message as it was not really part of their experiment, but that the experimenters were able to pay for the message. Results showed that neither the subjects' initial attitude toward the content of the message, the reward, nor the interaction of the two was a useful predictor of refusal to encode messages, but that the Burgoon scale was a useful predictor. (TJ)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

REFUSAL TO COUNTERATTITUDINALLY ENCODE: A STUDY

Davis Foulger

Experimental mortality may present a problem in any study where subjects are able to refuse to participate. In an investigation of why subjects refuse to encode counter-attitudinal messages, neither monetary reward offered nor subject's pre-test attitude was supported as underlying such refusals. This support should be gratifying to those who have engaged in counter-attitudinal research, as it reduces the probability that a mortality problem exists in counter-attitudinal research. Support was generated for the hypothesis that refusal to encode a counter-attitudinal message was symptomatic of a general disinclination toward communication as measured by the Burgoon Communication Anxiety Scales (1976).

When subjects in an experiment drop out of one experimental group but not another, or from more than one group, but for different reasons in each group, it becomes possible that this selective shrinkage, this experimental mortality, in the sample will affect the results. Good experimental design eliminates most problems of experimental mortality by limiting the duration of the measurement and and manipulation sequence, thus increasing the control the experimenter has over the actions of the subjects. Where, however, the experimenter surrenders some of this control by giving the subject a measure of choice in determining subject actions, mortality problems can return with equal or greater force.

One area of experimental research which is potentially vulnerable to mortality problems is counter-attitudinal advocacy, a line of research which explores the extent to which people can be induced to persuade themselves to a new attitude. The counter-attitudinal manipulation requires that the subject advocate, in a speech or essay, a position which is contrary to the subject's existing attitude. Cases of subjects refusing to encode a counter-attitudinal message are often reported in the literature. (Festinger and Carlsmith, 1959; Brehm and Cohen, 1962; Elms and Janis, 1965; Janis and Gilmore, 1965; Carlsmith, Collins, and Helmrich, 1964; Linder, Cooper, and Jones, 1967; Helmrich and Collins, 1968; Miller and McGraw, 1969; Cooper and Worchel, 1970; Kelman and Baron, 1974), but little has been done to determine just how serious a threat these refusals might pose to the internal validity of counter-attitudinal experimentation.

The near absence of such research is a poor commentary on the control of internal validity in counter-attitudinal experimentation. This is especially true when one considers the importance choice (decision freedom as manipulated by pressure for compliance; Linder, Cooper, & Jones, 1967) has on persuasion due to counter attitudinal encoding. Choice mediates between the "incentive" and "dissonance" effects of the counter attitudinal situation. Theoretically, increasing decision freedom increases the amount of personal commitment the subject brings to the counter-attitudinal task. This personal commitment increases the amount of cognitive dissonance felt by the subject and the amount of persuasion achieved in the process of dissonance reduction.

Miller and McGraw (1969) perform what may be the best available

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Davis Foulger

ED170796

444 808 57
CS 502 444

analysis of refusals when they compare the number of encoders and non-encoders. Using chi-square, they found a significantly higher number of low reward subjects refused to encode, but fail to report analysis of refusal on other variables, even though pre-test measures of attitude were available. The rewards, moreover, were not monetary.

Experimental mortality offers an alternative explanation for increasing persuasion in choice situations. Where subjects have the choice of not encoding a counter-attitudinal message, they may choose not to encode the message. Increasing monetary rewards may, however, make such refusals more difficult (by providing pressure for compliance). If so, high reward subjects might be more likely to encode the message than low reward subjects. Similarly, as the subject's attitude becomes further polarized from the position she/he is being to advocate, refusal to encode may become more likely. In either case the experimenter is faced with a mortality problem. If both occur, the experimenter has a severe mortality problem. Simply stated, the pre-experimental attitudes of the low reward condition, taken as a whole, would be more positive than those of the high reward condition. Given this pre-experimental advantage, greater persuasion in the low reward condition (as measured by post-test attitude), might be nothing more than equal persuasion in both reward conditions.

It should be clear from the above that refusal to encode presents the counter-attitudinal researcher with a potential problem. The most severe mortality problem, the result of subject effort to avoid highly dissonant situations, would evidence itself, with refusal to encode as the dependent variable, either as an interaction between initial attitude and reward or as the main effect for both variables presented in the above paragraph. Such results should signal the experimenter that the results of the counter-attitudinal manipulation be viewed with much greater caution than might normally be the case.

Other significant findings would be less serious. A direct effect for reward alone would simply indicate that the low reward was perceived as a low reward, hardly a subject for concern. A direct effect for pre-test attitude alone would be more damaging than one for reward, but not terribly damaging. Indeed, some might find it gratifying to know that extreme attitudes, at least, have some systematic influence on behavior. The only real damage would come in the knowledge that people with extreme attitudes are not going to be persuasible via counter-attitudinal advocacy.

Another possibility is that refusal to encode reflects some subject's general disinclination toward speaking publicly. This disinclination is presented in the literature as reticence (Phillips and Metzger, 1973), predisposition toward verbal behavior (Mortensen and Arntsen, 1974), and Communication Anxiety (Burgoon, 1976). A variety of symptoms of communication anxiety (reticence, etc.) have been identified, including a tendency for those not disposed toward communication to speak less often, and for shorter amounts of time, to participate less in group discussions, and to feel less confident in their verbal abilities than other, less reticent, people. It would seem reasonable to expect that communication anxiety would influence a person's decision to make a speech. Mortality due to communication anxiety would not damage counter-attitudinal experimentation. It would, however, place a restriction on the range of population for which counter-attitudinal advocacy provides a method of effective

persuasion.

Mortality in counter-attitudinal experimentation is already established. Subjects are reported to refuse to encode the counter-attitudinal message. The question is whether this mortality threatens current theory concerning the effect of counter-attitudinal advocacy on persuasion. Four potential sources of mortality have been identified and explored in this argument. These are:

1--REWARD: A main effect for reward with neither a main effect for attitude nor an interaction effect (reward X attitude) would indicate that mortality, while present, is not a problem. The low reward is likely seen as insufficient.

2--ATTITUDE: Mortality due to pre-manipulation attitude alone would damage counterattitudinal advocacy by indicating that extreme attitudes cannot be attacked via counter-attitudinal methods.

3--COMMUNICATION ANXIETY: A main effect for communication anxiety would restrict counter-attitudinal methods to those that are not highly anxious about speaking.

4--INTERACTION (REWARD X ATTITUDE): Either main effects for both reward and attitude or an interaction effect involving the variables would seriously challenge current interpretations of the results of counter-attitudinal manipulations. This source of experimental mortality could so bias the results that significant differences in post-test attitude might be recorded on the basis of this bias alone.

Experiment

Methodology

Reward, initial attitude, and communication anxiety were varied in an experiment involving 54 volunteer subjects drawn from Speech 101 classes at Florida Technological University. As the course was required of all students, this sample could be considered representative of the university's student population. The manipulation, run in conjunction with an experiment involving counter-attitudinal advocacy, involved three stages through which subjects progressed individually. In the first stage, a pre-test for attitude, subjects were asked to complete the Rokeach Value Scales (Rokeach, 1976). Attitude was gauged from the scale using a regression equation developed in a 146 subject control sample. The correlation between pre- and post-test measures was .61. Although less than optimal, the measure was considered sufficient to the task ($F=6.469$, $df=12/131$, $p=5.9 \times 10^{-9}$).

In the second stage subjects were informed that the experimenters were preparing for an experiment in which there would be an attempt to persuade subjects to a different point of view. As such experiments usually used actors, however, the experimenters were concerned that there was no real research on how persuasive people without an actor's vocal training were. People participating in the present experiment were being asked, therefore, to encode a short persuasive message advocating a reduction in military and increase in social spending for use in the experiment. The topic had been selected in a pre-study because of the divergence of opinion on the issue. Subjects were told that they were not required to encode the message as it was not really part of the experiment. They were informed, however, that the experimenters were able to pay for the message. They were then offered either 50 cents or \$1.50 and asked if they would be willing to encode a message advocating

decreased military and decreased social spending for that sum. If the subject was willing, he/she encoded the message and was paid.

The third stage of the experiment was the post test. All subjects were required to participate in this portion of the experiment, which consisted of four questionnaires. One of these questionnaires was the Burgoon Unwillingness to Communicate Scale (Burgoon, 1976), a twenty item, two factor scale intended to measure the extent of a person's unwillingness to communicate with others.

The resulting experiment involved three independent variable. Two conditions of reward, high (\$1.50) and low (50¢), were manipulated. Both attitude and unwillingness to communicate were treated as continuous variables. Both attitude and unwillingness to communicate were blind during the experiment, leaving the variables incapable of creating experimenter bias.

Coding

The reward conditions were coded at 5 (50¢) and 15 (\$1.50). Attitude was coded as a standard score, with negative values indicating a negative attitude toward the message and positive values indicating a positive attitude toward the message. The two subscales of the unwillingness to communicate scale were coded according to table 1 of Burgoon's (1976, p.64) article. Thus for the approach-avoidance scale, a high score indicates low communication anxiety. It should be noted that the direction of the approach-avoidance scale is reversed in table 2 of Burgoon's paper (1976, p.66). Finally, the dependent variable, act of encoding, was effect coded with encoders assigned the value -1 and non-encoders assigned 1.

Analysis

The results were analyzed in a two level hierarchy stepwise multiple regression. First, reward, attitude, and their interaction were regressed on act of encoding. The approach-avoidance and reward subscales of the Unwillingness to Communicate scale were then added to the regression. A separate regression then examined the effects of the Unwillingness to Communicate Scales alone. As a check on the results the data was also analyzed via discriminate analysis. The results obtained via the discriminate procedure parallel those obtained in the regression procedure.

Results

Of the fifty-four subjects offered an opportunity to encode the message, fourteen, about one fourth of the sample, refused to encode the message. Table one shows the correlations among the variables in the experiment. Of the correlations with act of encoding, only one, the $-.36$ correlation of the approach-avoidance subscale, is significant alone ($F=7.69$, $df=1/52$, $p=.008$). In the multiple regression, shown in table two, approach-avoidance subscale remains the most important variable ($F=10.61$, $df=1/48$, $p=.002$), but a second variable, the reward subscale, also proves a significant predictor of act of encoding ($F=4.78$, $df=1/48$, $p=.03$). Alone, the reward scale is not a useful predictor ($F=.84$, $df=1/52$, $p=.36$), but a suppressor relationship evidenced by the unbalanced correlate triangle found between the reward and approach-avoidance scales (.37) and each with act of encoding (.13 and $-.36$, respectively), is released in the regression.

Alone, the approach avoidance scale can account for less than thirteen percent of the variance in act of encoding; the reward subscale

	*	*	*	*	*	*	*	*	*	*	*
	Reward	Itl.Att.	R X I.A.	Reward	Aprch						
	Scale			Scale	Avoid						
Act of Encoding	-.112	.060	.143	.127	-.359*						
Reward		-.141	-.125	.007	-.011						
Initial Attitude			.005	-.012	-.103						
Rew X Initial Att				-.025	-.264*						
Reward Subscale					.370*						
Approach-Avoidance Subscale											

Table One: Correlation Matrix for variables in regression

*p<.05

accounts for less than two percent. Together, the two scales account for nearly twenty-one percent of the variance ($R^2=.207$, $F=2.72$, $df=2/51$, $p=.003$) in act of encoding. This compares favorably with the five variable regression's coefficient of determination ($R^2=.221$, $F=2.72$, $df=5/48$, $p=.03$).

	*	*	*	*	*	*	*	*	*	*	*
	B	S.E.	F	p@1/48							
Rew X Initial Att	.01710	.17712	.009	.92							
Reward	-.02017	.02227	.820	.37							
Initial Attitude	-.00109	.18258	.000	.99							
Approach-Avoid.	-.03288	.01009	10.611	.002							
Reward Subscale	.04322	.01982	4.778	.03							

Table Two: Regression of reward, initial attitude, and unwillingness to communicate on act of encoding

Discussion

It is clear from the above results that refusal to encode messages need not be tied to either the subject's initial attitude concerning the content of the message or to the rewards obtainable as a result of such encoding. Neither attitude, reward, nor their interaction promise to be predictive of encoding in the counter-attitudinal manipulation. The only useful predictor was the Burgoon Unwillingness to Communicate Scales.

The results should not be interpreted as precluding the possibility of attitude or reward having an influence on the decision to encode. While \$1.50 is clearly a higher reward than 50 cents, both rewards are low compared to many that have been offered in counter-attitudinal manipulations. The difference in rewards may not have been enough to discriminate on act of encoding. The rewards were, in the counter-attitudinal manipulation, high enough to effect differentiated levels of persuasion (see Foulger, 1977), but intensifying dissonance and overcoming communication anxiety are two different things. Clearly, however, there is little promise of such effects in these results.

Two criticisms must also be made concerning the success of the Unwillingness to Communicate scales. First, the instrument was administered during the post test procedure and may reflect the subjects

immediate experience of communication. This criticism can be turned two ways, however. First, they may have reacted to their refusal by stating in their responses, that they often feel anxious about communicating. Second, subject reaction to refusal may have been to reassure themselves that they don't often feel anxious about communication. Third, however, it should be remembered that subjects may not have reacted at all.

A second criticism lies in the small sample size (54 subjects). The small sample may have had the effect of inflating the variance accounted for. The only way to test the validity of either of these criticisms is further study of refusal to encode persuasive messages.

In practice, the most effective prediction from the unwillingness to communicate scale was obtained through the linear combination of the reward and approach-avoidance subscales. The nature of the linear combination is of critical importance, however. Although the scales are positively correlated with each other, the approach-avoidance scale is correlated negatively and the reward subscale correlated positively, with respect to act of encoding. This unbalanced correlate triangle was the basis for the suppression which was shown in the results to produce a multiple correlation greater than the sum of its parts. This suppression requires that the approach-avoidance subscale be subtracted from (negatively weighted when added to) the reward subscale. With the regression weights shown in table two, the multiple correlation is .454. With the subtraction maintained, but the subscales equally weighted, the multiple correlation is .449 ($F=6.44$, $df=2/54$, $p=.003$). As regression weights are known to be changeable, the latter course, subtraction of equally weighted subscales is recommended to those using the scale for similar purposes. The difference in scores is too small to make a difference.

More important is the effect of adding (failing to negatively weight with respect to each other) the two subscales. The effectiveness of the scales drops markedly, to a .234 multiple correlation ($F=1.477$, $df=2/51$, $p=.24$). Plainly, it is better to use the reward scale alone than it is to add it to the reward scale.

All of this is reversed if one aligns the scales according to table two of Burgoon's presentation. In that table (1976, p.66) the approach-avoidance is the mirror image of the table one approach-avoidance factor. As a result, use of table two results in the negative correlation of the subscales and the positive correlation of both with act of encoding. The suppression remains, but the technique for combining the scales becomes addition, not subtraction.

Conclusions

Although a large amount of mortality was observed in this experiment, only one of four potential sources of that experimental mortality found support. Although restrictions on the generalizability of the results exist in the small rewards and the single topic, it seems clear that there are circumstances under which mortality does not measurably affect the results of a counter-attitudinal advocacy manipulation. Neither reward, attitude, nor their interaction proved predictive of the subjects' decision to encode the message. The predictive power of the unwillingness to communicate scale does, however, indicate that there are people who are not susceptible to counter-attitudinal advocacy simply because they will refuse to encode the counter-attitudinal message. This potentially re-

stricts the power of the counter-attitudinal manipulation as a tool of persuasion, but by no means undermines the experiments in the area.

Researchers who engage in counter-attitudinal advocacy manipulations should be pleased with the results insofar as they shore up a potential weak spot in their manipulations. Any future research in counter-attitudinal advocacy should, however, take account of experimental mortality. As long as subjects are allowed to decide not to participate in any part of a manipulation, mortality cannot be taken for granted. It is therefore recommended that experimenters take steps to insure that experimental mortality is not biasing results in any study in which subjects have the opportunity to refuse to participate in any portion of the manipulation.

Awareness of the ways in which pre-experimental predispositions can influence subject refusal to participate should strengthen the experimenters' understanding of the entire manipulation. Analysis of the available data for any subject who does refuse to participate, via careful pre-testing and careful monitoring of the conditions under which the refusal occurred should strengthen the internal validity of experiments where experimental mortality presents a problem. Routine reporting of such investigations should make studies focusing on mortality problems, such as this one, unnecessary, as well they should be.

References

- Brehm, J.W. & Cohen, A.R. Explorations in Cognitive Dissonance. New York; Wiley, 1962.
- Burgoon, J. The unwillingness to communicate scale: Development and validation. Communication Monographs, 1976, 13, 60-69.
- Campbell, D.T. & Stanley, J.C. Experimental and Quasi-experimental Designs for Research. Chicago; Rand-McNally, 1963.
- Carlsmith, J.M., Collins, B.E., and Helmrich, R.K. Studies in forced compliance: The effect of pressure for compliance on attitude change produced by face to face role playing and anonymous essay writing. Journal of Personality and Social Psychology, 1966, 4, 1-13.
- Cooper, J. & Worchel, S. Role of undesired consequences in arousing cognitive dissonance. Journal of Personality and Social Psychology, 1970, 16, 1-13.
- Elms, A.C. & Janis, I.L. Counter norm attitudes induced by consonant versus dissonant conditions of role playing. Journal of Experimental Research in Personality, 1965, 1, 50-60.
- Festinger, L. & Carlsmith, J.M. Cognitive consequences of forced compliance. Journal of Abnormal and Social Psychology, 1959, 58, 203-210.
- Foulger, D. Distraction and Dissonance: A model of the persuasive process. Unpublished masters thesis, Florida Technological University, 1977.
- Helmrich, R.K. & Collins, B.E. Studies in forced compliance: Commitment and magnitude of inducement to comply as determinants of opinion change. Journal of Personality and Social Psychology, 1968, 10, 75-81.
- Janis, I.L. & Gilmore, J.B. The influence of incentive conditions on the success of role playing in modifying attitudes. Journal of Personality and Social Psychology, 1965, 1, 17-27.
- Kelman, H.C. & Baron, R.M. Moral and Hedonic dissonance: A functional analysis of the relationship between discrepant action and attitude

- change. In S. Himmelfarb & A.H. Eagly (Eds.), Readings in Attitude Change. New York; Wiley, 1974.
- Linder, D.E., Cooper, J., & Jones, E. Decision freedom as a determinant of the role of incentive magnitude in attitude change. Journal of Personality and Social Psychology, 1967, 6, 245-254.
- Miller, G.R., & McGraw, R.L. Justification and self-persuasion following commitment to encode and actual encoding of counter-attitudinal communication. Speech Monographs, 1969, 36, 443-451.
- Mortensen, C.D. & Arntson, P.H. The effect of predispositions toward verbal behavior on interaction patterns in dyads. Quarterly Journal of Speech, 1974, 60, 421-430.
- Phillips, G.M. & Metzger, N.J. The reticent syndrome: Some theoretical considerations about etiology and treatment. Speech Monographs, 1973, 40, 220-230.

Presented as a debut paper at the November, 1978 meeting of the Speech Communication Association in Minneapolis, Minnesota. The criticisms of Dr. A. Pryor, Dr. C. Dziuban, Dr. P. Taylor, And Dr. L. Tanzi of Florida Technological University and of Dr. D. Hewes, and Dr. J. Cappella of the University of Wisconsin, Madison are appreciated.